

What is claimed is:

1. A hearing apparatus, for a user having a hearing canal, comprising:
 - a housing adapted to fit within at least a portion of the hearing canal, the housing having at least one access port;
 - 5 a cover adapted for at least partially covering the at least one access port;
 - signal processing electronics connected to a microphone and a power supply, the signal processing electronics adapted to fit within the at least one access port;
 - a microphone housing, adapted to mount to the housing and the access port, the microphone housing connected to the microphone, the signal processing electronics and the power supply;
 - 10 a receiver, connected to the signal processing electronics; and
 - a fastener as a unitary connector of the cover and microphone housing to the housing.
- 15 2. The apparatus of claim 1, wherein the apparatus includes a telecoil at least electrically connected to the signal processing electronics.
3. The apparatus of claim 1, wherein the apparatus includes wireless communication electronics at least electrically connected to the signal processing electronics.
- 20 4. The apparatus of claim 1, wherein the microphone housing fixedly locates the microphone.
- 25 5. The apparatus of claim 4, wherein the microphone housing fixedly locates the signal processing electronics.
6. The apparatus of claim 5, wherein the microphone housing fixedly locates the receiver.

7. The apparatus of claim 1, wherein the housing is comprised of sections.
8. The apparatus of claim 7, wherein the housing includes a shell and a faceplate, the
5 faceplate including the access port.
9. The apparatus of claim 8, wherein the faceplate is trimmed.
10. The apparatus of claim 7, wherein the housing includes a shell combined with a
10 bezel, defining the access port.
11. The apparatus of claim 10, wherein the bezel is glued to the shell.
12. The apparatus of claim 1, wherein the microphone housing includes a
15 programming connector connected to the signal processing electronics.
13. The apparatus of claim 12, wherein the programming connector is accessible while
the cover is closed.
- 20 14. The apparatus of claim 12, wherein soldering areas are located on the microphone
housing.
15. The apparatus of claim 14, wherein the microphone housing includes:
25 a proximate surface located proximate to the programming interface;
a distal surface located distal to the programming interface; and
soldering areas located on the distal surface and adapted for soldering
other components to the microphone housing.

16. The apparatus of claim 1, wherein the cover rotates around the fastener, and detachably locks into a closed position.

17. The apparatus of claim 16, wherein the microphone housing includes battery
5 terminals and the cover is adapted to hold a battery, and is adapted to move the battery into and out of electrical communication with battery terminals.

18. The apparatus of claim 1, wherein the receiver includes a pliable receiver tube adapted for forming a leak resistant connection with a speaker.

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19. The apparatus of claim 18, wherein the receiver is sealingly connected to an opening in the housing with an adhesive.

20. The apparatus of claim 1, wherein a microphone hood is detachably connected to
15 the microphone housing.

21. The apparatus of claim 20, wherein the microphone housing includes a port adapted to flow air and to connect to a microphone.

20 22. The apparatus of claim 21, wherein the microphone hood includes external ports linked to an internal port such that air may flow between the external ports and the internal port.

23. The apparatus of claim 22, wherein microphone, microphone housing and
25 microphone hood are connected, such that air may flow between the external ports and the microphone.

24. The apparatus of claim 23, wherein the external ports are linked with a passageway which allows passage of a cleaning element through the external ports.

25. The apparatus of claim 23, wherein the connection of the microphone, microphone housing, and microphone hood includes at least one o-ring seal.

- 5 26. A hearing apparatus, for a user having a hearing canal, comprising:
- a microphone connected to signal processing electronics and a power supply;
 - a housing shaped for use in at least a portion of the hearing canal and including at least one opening; and
 - a microphone hood detachably connected to the opening in the housing.

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27. The apparatus of claim 26, wherein the microphone hood includes external ports linked to an internal port such that air may flow between the external ports and the internal port.

- 15 28. The apparatus of claim 27, wherein microphone, microphone housing and microphone hood are connected, such that air may flow between the external ports and the microphone.

- 20 29. The apparatus of claim 28, wherein the external ports are linked with a passageway which allows passage of a cleaning element through the external ports.

30. The apparatus of claim 28, wherein the connection of the microphone, microphone housing, and microphone hood includes at least one o-ring seal.

31. A method of assembling a hearing apparatus, for a user having a hearing canal, comprising:

- making a housing shaped for use at least partially inside the hearing canal, the housing including an access port and an opening;
- 5 assembling a microphone, a receiver, and signal processing electronics to a microphone housing;
- inserting the microphone housing, microphone, receiver, and signal processing electronics into the housing through the access port;
- placing a cover to at least partially close the access port;
- 10 using a fastener as a unitary connector of the cover and the microphone housing to the housing.

32. The method of claim 31, including making the housing from sections.

- 15 33. The method of claim 32, wherein the making the housing comprises combining a shell and a faceplate.

34. The method of claim 33, wherein the combining the shell and the faceplate includes trimming the faceplate.

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35. The method of claim 32, wherein the making the housing comprises combining a shell and a bezel to define an access port.

- 25 36. The method of claim 34, wherein the combining the shell and bezel includes gluing the bezel to the shell.

37. The method of claim 31, wherein the method includes sealingly connecting the receiver to the housing opening.

38. The method of claim 37, wherein the sealingly connecting includes trimming the receiver.

39. The method of claim 31, wherein the hearing apparatus includes a power supply.

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40. The method of claim 39, wherein the hearing aid housing includes terminals which connect to the power supply.

41. The method of claim 31, wherein the hearing aid housing is adapted to connect to
10 a hearing aid programmer.

42. A hearing apparatus, for a user having a hearing canal, comprising:

- a housing adapted to fit within at least a portion of the hearing canal, the housing having at least one access port and a housing mount;
- 15 a cover adapted for at least partially covering the at least one access port, and including a cover mount;
- signal processing electronics connected to a microphone and a power supply, the signal processing electronics adapted to fit within the at least one access port;
- 20 a microphone housing, adapted to mount to the housing and the access port, the microphone housing connected to the microphone, the signal processing electronics and the power supply, and including a microphone housing mount;
- a receiver, connected to the signal processing electronics; and
- 25 a pin as a unitary connector of the housing mount, the cover mount, and the microphone housing mount.

43. The apparatus of claim 42, wherein the housing is comprised of sections.

44. The apparatus of claim 43, wherein the housing includes a shell and a faceplate, the faceplate including the access port.

45. The apparatus of claim 43, wherein the housing includes a shell combined with a
5 bezel, defining the access port.

46. The apparatus of claim 42, wherein the microphone housing includes a programming connector connected to the signal processing electronics.